**STEMI Equivalents**

...an opportunity to save myocardium

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We all know what to do with this...

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**STEMI Equivalents**

- Critical left main disease
- Isolated posterior MI
- Wellens’ syndrome
- Persistent hyperacute T waves (de Winters)
- Sgarbossa criteria for LBBB / paced rhythm

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**Case 1.** 70-yr farmer with chest pain

Critical Left Main Artery Disease

- Wellens described association with:
  - ST-segment depression ≥ 8 leads
  - ST-segment elevation in lead aVR
  - Especially if ST-elevation in aVL

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Another critical left main stenosis

A recent case - EMS EKG

EKG in the ED

90% left main occlusion

Case 2. 48-yo man with chest pain

Isolated posterior wall MI
- Posterior MI usually with inferior MI
- 5% MIs - isolated posterior wall
- Isolated posterior wall MI
  - ST-segment depression V1-3
  - As MI evolves:
    - Upright T waves V1-3
    - Tall R waves V1-2
Acute inferior – posterior MI

ST-segment depression in V1-3

A recent case—circ stent

Evolving posterior MI with tall R-V2

Hi Sue,

I just wanted to let you know that I won an argument with one of my interventional cardiologist about an isolate posterior MI with ST depressions in v1-v3

Thank you for being an amazing attending. I could hear your voice when I looked at the EKG.

The patient went right to the cath lab and is doing well.

Sent from mobile

Case 3. 65-yo woman with 90 mins severe substernal chest pain earlier
Wellens’ warning
- Left anterior descending (LAD)
- Associated with changes V_{2-4}
  - Deeply inverted T waves
  - Biphasic T waves
- Change from initial normal EKG
- During pain-free interval
- Normal enzymes

Wellens’ syndrome

Wellens’ syndrome, type 2

Wellens’ original description - 1982
- 18% of admitted unstable angina
  - 50% on presentation
  - Remainder within 24 hours
- If NOT revascularized \(\rightarrow\) 75% large anterior MI
  ...within weeks

60-year-old man with chest pain earlier in the day

ECG from 1 month prior
Case 4. 60yo man with chest pain

- Persistent hyperacute Ts
- ST-segment depression
- Proximal LAD occlusion
- 2% of anterior MIs
- 30/1532 anterior MI

De Winter’s sign

The New England Journal of Medicine

Case 5. 75yo man with chest pain
Sgarbossa criteria

Smith’s modified criteria
- “excessive discordance”
- ST/S ≤ -0.25 – increased specificity

Sgarbossa criteria
concordant ST-elevation

70-year-old man with chest pain

In conclusion...
Remember these STEMI equivalents
In conclusion...

- Critical left main occlusion
  - ST-depression ≥ 8 leads
  - ST-elevation aVR

References

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*Am Heart J*  166:409-13, 2013

Veroudan, de Winter. De Winter sign